

PATENT
Attorney Docket 28179-07
Former Atty. Docket 21101-0006
Former Former Atty. Docket 7413-1006

1. (Canceled)
2. (Canceled)
3. (Canceled)
4. (Canceled)
5. (Canceled)
6. (Amended) A method for disassembling a toner cartridge [container] having thermoplastic joining surfaces comprising:
 - providing a toner cartridge [container] having sections joined along interfacing thermoplastic joining surfaces [;] said joining surfaces comprising a plurality of interface line segments, each interface line segment having a thickness;
 - determining the thickness of each said interface line segment;
 - removably retaining said toner cartridge [container] in a gimbal having at least one axis of rotation;
 - providing a laser having a predetermined laser beam power and adapted to produce a laser beam capable of cutting through thermoplastic materials;
 - providing a moveably adjustable light path;
 - directing the laser beam from said laser to said container along said moveably adjustable light path;
 - providing a computer processor operationally connected with said gimbal, said laser and said moveably adjustable light path;
 - controlling operation of said laser, said gimbal and said moveably adjustable light path by said computer processor in response to a computer program;
 - causing said laser beam to trace a path along each said line segment of the interface between said joining surfaces by moving the moveably adjustable light path and the gimbal in response to said computer program and at a predetermined speed;

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determining said speed by correlating the thickness of each said interface line segment with said laser beam power;

cutting through the thermoplastic along said interface with said laser beam;
removing said container from said gimbal; and
separating said container sections along the cut interface between joining surfaces.

7. (Amended) A disassembled toner cartridge [container] made from an original toner cartridge and suitable to be remanufactured or reassembled comprising:

a disassembled original toner cartridge [container] having sections with thermoplastic joining surfaces adapted to be sealingly joined along an interface between said joining surfaces and to achieve alignment and orientation necessary for proper operation;

elements required for proper function of said original toner cartridge [container] when assembled integrated into said container] and positioned adjacent said interface between joining surfaces of said original toner cartridge remaining undamaged in said disassembled toner cartridge;

said interface having been cut through with a laser beam;
operational functional elements; and
separated container sections.

8. The disassembled container of claim 7 wherein:
said interface between joining surfaces has a circuitous configuration.

9. The disassembled container of claim 7 wherein:
said container may be reassembled along said interface between joining surfaces.

10. The disassembled container of claim 7 wherein:
said joining surfaces are composed of Acrylonitrile Butadiene Styrene.

11. The disassembled container of claim 7 wherein:
said joining surfaces are composed of a thermoplastic material having a melting temperature in the same melting temperature range as Acrylonitrile Butadiene Styrene polymers.

Application No. 10/659,881

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12. (Canceled)

13. (Canceled)

14. The disassembled container resulting from the method of claim 6.